

A method and apparatus for emission lithography using a patterned emitter wherein, in the apparatus for emission lithography, a pyroelectric emitter or a ferroelectric emitter is patterned using a mask and it is then heated. Upon heating, electrons are not emitted from that part of the emitter covered by the mask, but are emitted from the exposed part of the emitter not covered by the mask so that the shape of the emitter pattern is projected onto the substrate. To prevent dispersion of emitted electron beams, which are desired to be parallel, the electron beams are controlled using a magnet, a direct current magnetic field generator or a deflection system, thereby achieving an exact one-to-one projection or an exact x-to-one projection of the desired pattern etched on the substrate.

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